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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
FLETCHER, JAMES A	
ART UNIT	**PAPER NUMBER**
2616	11

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/419,164	Applicant(s) KORI ET AL.	
	Examiner James A. Fletcher	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12,14-30,32-48 and 50-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14-30,32-48 and 50-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 15, lines 4-6, filed 29 April 2004, with respect to the rejection(s)of claim(s) 13, 31, and 49 under Callway et al have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Horne.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 4-9, 12, 15-16, 19, 22-27, 30, 33-34, 37, 40-45, 48, and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kori et al (5,788,064), and further in view of Horne (4,685,131).

Regarding claims 1 and 19, Kori et al disclose a signal conversion apparatus and method comprising:

- signal conversion means and method for converting an input signal to a converted signal (Col 8, lines 10-11 "A/D converter 54 which converts the analog HD video signal to a digital HD video signal");
- determination means and method for detecting additional information added to the input signal and for determining whether or not the additional information indicates a use limitation for the converted signal (Col 8, lines 18-

26 "VBI decoder 51...extracts from the extracted VBI signal the CGMS information, and generates...the control signal that is supplied to gate circuits"); and

- use limitations means and method for disabling the converted signal when the use limitation is copy prohibition or copy limitation (Col 8, lines 9-11 "gate circuit 50 supplies, in response to the control signal, the video HD signal to A/D converter").
- Kori et al disclose a signal conversion apparatus and method with means and step for identifying a signal with use limitation data (Col 8, lines 18-26 "VBI decoder 51...extracts from the extracted VBI signal the CGMS information, and generates...the control signal that is supplied to gate circuits"), but do not specifically disclose notification means and step for notifying a user of the use limitation for the converted signal.

Horne teaches notifying a user of with a visual indication of use limitation for the converted signal (Col 1, lines 35-37 "It is necessary that the signals be coded in a way which can be decoded only by the subscriber's receivers" and Col 3, lines 3-5 "The subscriber will be advised...by the appropriate indication on the display").

As taught by Horne, a visual indication to a user that the signal is not being recorded because it is copy protected is a well-known, commercially available and widely used means and method of preventing user frustration from an unexplained anomaly in the operation of his equipment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kori et al to include a visual display to the user of a use limitation for the converted signal.

Regarding claim 37, Kori et al disclose a signal conversion apparatus comprising:

- a signal converter adapted to convert an input signal into a converted signal (Col 8, lines 10-11 "A/D converter 54 which converts the analog HD video signal to a digital HD video signal");
- a signal detector adapted to examine the input signal, detect additional information added to the input signal and determine whether the additional information indicates a use limitation for the input signal (Col 8, lines 18-26 "VBI decoder 51...extracts from the extracted VBI signal the CGMS information, and generates...the control signal that is supplied to gate circuits"); and
- a switch for disabling the converted signal when the use limitation indicates that copying of the input signal is prohibited or limited (Col 8, lines 9-11 "gate circuit 50 supplies, in response to the control signal, the video HD signal to A/D converter").
- Kori et al disclose a signal conversion apparatus and method with means and step for identifying a signal with use limitation data (Col 8, lines 18-26 "VBI decoder 51...extracts from the extracted VBI signal the CGMS information, and generates...the control signal that is supplied to gate circuits"), but do not

specifically disclose notification means and step for notifying a user of the use limitation for the converted signal.

Horne teaches notifying a user of with a visual indication of use limitation for the converted signal (Col 1, lines 35-37 "It is necessary that the signals be coded in a way which can be decoded only by the subscriber's receivers" and Col 3, lines 3-5 "The subscriber will be advised...by the appropriate indication on the display").

As taught by Horne, a visual indication to a user that the signal is not being recorded because it is copy protected is a well-known, commercially available and widely used means and method of preventing user frustration from an unexplained anomaly in the operation of his equipment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kori et al to include a visual display to the user of a copy-protected signal.

Regarding claims 4, 22 and 40, Kori et al disclose a signal conversion apparatus and method wherein the input signal is a video signal (Col 8, line 10 "the video HD signal") and the signal conversion means is adapted to convert a signal format of the video signal (Col 8, lines 10-12 "the video HD signal...A/D converter 54 which converts the analog HD video signal to a digital HD video signal").

Regarding claims 5, 23, and 41, Kori et al disclose a signal conversion apparatus and method where the signal format conversion is selected from the group consisting of converting a high-definition television signal into a standard television

signal and converting a standard television signal into a high definition television signal (Col 10, lines 18-20 "An NTSC video signal is supplied to processor 92 which 'up-converts' the NTSC signal into an HD signal").

Regarding claims 6, 24, and 42, Kori et al disclose a signal conversion apparatus and method wherein the signal format conversion is selected from the group consisting of converting a video signal of image data in a format for computer processing into a high definition television signal, converting a video signal of image data in a format for computer processing into a standard television signal, converting a high-definition television signal into a video signal of image data in a format for computer processing, and converting a standard television signal into a video signal of image data in a format for computer processing (Col 8, lines 10-12 "the video HD signal...A/D converter 54 which converts the analog HD video signal to a digital HD video signal").

Regarding claims 7, 25, and 43, Kori et al disclose a signal conversion apparatus and method wherein the video signal is an analog video signal and the signal conversion means is adapted to convert the analog video signal into a digital video signal (Col 8, lines 10-12 "the video HD signal...A/D converter 54 which converts the analog HD video signal to a digital HD video signal").

Regarding claims 8, 26, and 44, Kori et al disclose a signal conversion apparatus and method for enforcing copy protection on converted signals wherein the signal converter is adapted to convert a data compression method of the video signal (Col 9, lines 38-50 "A compressed and encoded digital HD signal [e.g., having the

MPEG format] is reproduced from a digital video disk...Circuit 74 processes the reproduced signal in a manner well known in the art...and supplies the digital HD signal to a D/A converter").

Regarding claims 9, 27, and 45, Kori et al disclose a signal conversion apparatus and method wherein the input signal is an audio signal (Col 7, lines 61-62 "Digital video tape recorder 2 is also operable to receive an analog audio HD signal at a terminal t12").

Regarding claims 12, 30, and 48, Kori et al disclose a signal conversion apparatus and method wherein the audio signal is an analog audio signal and the signal conversion means is adapted to convert the analog audio signal into a digital audio signal (Col 8, lines 1-2 "A/D converter 52 which converts the analog audio HD signal to digital audio HD signal").

Regarding claims 15, 33, and 51, Kori et al disclose a signal conversion apparatus and method for enforcing copy protection on converted signals, wherein the input signal is a digital signal (Col 6, lines 12-13 "head mechanism 3 reproduces a digital HD signal from a magnetic tape").

Regarding claims 16, 34, and 52, Kori et al disclose a signal conversion apparatus and method wherein a the additional information comprises a plurality of different types of information, and when the determination means determines that any one of the plurality of different types of information indicates that copying of the input signal is prohibited or limited, the use limitation means disables the converted signal (Col 1, lines 38-50 "The ID signal...is comprised of 14 bits of information data and 6 bits

of correction code... Word 0...of the information data identifies the transmission format of the video signal...and bits 7 and 8 thereof represent copy generation management system...information which indicates whether the video signal is either fully copy protected, partially copy protected...or not copy protected" and Col 8, lines 18-26 "VBI decoder 51...extracts from the extracted VBI signal the CGMS information, and generates...the control signal that is supplied to gate circuits").

3. Claims 10-11, 18, 28-29, 36, 46-47, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kori et al and Horne as applied to claims above.

Regarding claims 10, 28, and 46, Kori et al disclose a signal conversion apparatus and method for enforcing copy protection on converted audio signals (Col 8, lines 12-15 "Audio and video signal processing circuits 53, 55 perform various processes on the respective digital audio and video data, such processes including shuffling and error detection/ correction"), but do not specifically disclose converting the sampling frequency of an audio signal.

The examiner takes official notice that the sampling frequency of an input signal is notoriously well known to be a design choice, and may be modified to suit the needs of the product or its application. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to enforce copy protection when converting the sampling frequency of the incoming audio signal.

Regarding claims 11, 29, and 47, Kori et al disclose a signal conversion apparatus and method for enforcing copy protection on converted audio signals, but do not specifically disclose converting a compression method.

The examiner takes official notice that data compression conversions are notoriously well-known and commercially available techniques for modifying compressed data to solve a variety of problems, including bandwidth and storage limitations. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to enforce copy protection when converting from one method of compression to another.

Regarding claims 18, 36, and 54, Kori et al disclose a signal conversion apparatus and method for enforcing copy protection on converted signals, but do not specifically disclose treating a signal that is encrypted.

The examiner takes official notice that data encryption is a notoriously well-known and commercially available method of protecting data from unauthorized viewing. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to enforce copy protection on an incoming encrypted digital signal.

4. Claims 2-3, 20-21, and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kori et al and Horne as applied to claims above, and further in view of Rhodes (5,280,397).

Regarding claims 2, 3, 20, 21, 38, and 39, Kori et al disclose a signal conversion apparatus and method wherein the input signal is a video signal (Col 8, line 10 "the video HD signal") but do not specifically disclose that the conversion converts progressive scanning into interlaced scanning, or converts the number of scanning lines.

Rhodes teaches conversion from high definition TV signals to standard definition signals (Col 5, lines 21-23 "Signal sources for proposed high-definition television are provided..." and Col 6, lines 7-9 "An actual...signal output from test bed is also sent to processing equipment for NTSC compatibility tests"). High definition signals are known to include formats wherein the scanning is progressive, as well as having a number of scanning lines that is greater than standard definition.

As taught by Rhodes, signal conversion from high definition to standard definition is a well-known and available signal conversion technique. In a system where copy-protected high definition signals are to be shown or stored on standard definition equipment, common sense would dictate that the copy-protection data would be understood and heeded by the storage and/or display equipment. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to enforce copy protection while converting from high definition to standard definition.

5. Claims 14, 17, 32, 35, 50, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kori et al and Horne as applied to claims above, and further in view of Ryan et al (6,374,036).

Regarding claims 14, 32, and 50, Kori et al disclose a signal conversion apparatus and method wherein additional information is provided to indicate that copying of the input signal is prohibited or limited (Col 8, lines 18-26 "VBI decoder 51...extracts from the extracted VBI signal the CGMS information, and generates...the control signal that is supplied to gate circuits"), but they do not specifically disclose the use of watermarks as a carrier of such additional information.

Ryan et al teach the use of watermarks to determine copy prohibition or copy limitation (Col 1, lines 15-18 "The present invention relates to copy protection of video material by embedding robust identification codes [e.g., watermarks or fingerprints] in video signals, and use of these identification codes for a 'copy-once' method and apparatus").

As taught by Ryan, watermarks are a well-known and available technique of providing copy protection to image data signals. In a system where the data conversion detected copy protection in the form of a watermark, common sense would dictate that the copy protection data would be detected and heeded by the storage and/or display equipment. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to enforce copy protection dictated by a watermark.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (703) 305-3464. The examiner can normally be reached on 7:45AM - 5:45PM M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached at (703) 308-9644.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only).

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

JAF
July 21, 2004

VINCENT BOCCIO
PRIMARY EXAMINER